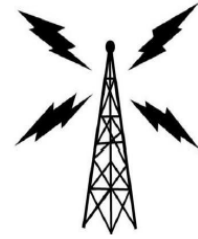




DFARG Signal



August 27, 2026

Volume 8 Issue 9

Generator Project

Given the current uncertainty about the club's future, we have canceled the generator project. When I arrived home after the club meeting last Thursday night, Doris had an email from the ARDC. While they were disappointed that we might lose our facility, they sent the correct address and format for returning the grant money. This was handed over to John S., who sent a check for the full amount. Thank you, John, for handling this quickly.

Hopefully, the club will land on its feet, and the generator project can be revisited.

Dutch Fork Net

Mike, KX4TKO, continues to do an outstanding job with the net. Coming up with timely and meaningful topics is not easy to do every week, but he manages very well. We need to support him as much as we can, and if you have a topic of interest, give him a shout. The net is on Mondays at 7:00 PM on the 147.000 repeater. Thanks

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DUTCH FORK AMATEUR RADIO GROUP MONTHLY MEETING MINUTES

August 2026

CALL TO ORDER

The meeting was called to order at 6:55 PM following the Pledge of Allegiance.

ATTENDANCE:

Present officers:

- Rick Senkowsky, President
- Brandon Hawkins, Vice President
- John Seibels, Treasurer
- Mike Connelly, Secretary

EVENTS:

September 12, 2026 – (9 am) VE Test session. Currently 2 examinees.

September 26, 2026 – (9 am) Possible VE Test session for SC State Guard with approximately 20 members testing for Technician License.

October 10, 2026 (8 am – 1 pm) 2nd Annual Dutch Fork Amateur Radio Group hamfest/swap meet. ARRL sanctioned.

Come one, come all – we look forward to seeing you there. We will need several additional volunteers to help during the event. Please reach out to any of the club officers.

We also discussed renting the building next door during those hours. We will advise on this once a decision has been confirmed.

TOPIC FOR DISCUSSION:

In July 2026, the club received notification from the mayor of Little Mountain that she is terminating our lease and wants the club out of the building by October 31, 2026. We have informed the club attorney Jim Walters. All communication moving forward will go through the Town of Little Mountain attorney, Kyle Parker. We have submitted

the club's position statement to said attorney. The mayor's statement suggests that the club has not provided any emergency services for the Town of Little Mountain. The lease states emergency communications not services. It is our belief that we have and still do provide emergency communications for the Town of Little Mountain, Newberry County, and the State of South Carolina.

There is a hypothetical situation where the mayor wants to make the Town of Little Mountain a biking destination. A specific individual working with the mayor claims the Palmetto Trail Conservancy wants to rent both buildings, and she will do whatever it takes to get us out of the building.

A motion was made, 2nd and approved to take a firm stance on DFARG's position on this matter. We formed a 6-member committee to start looking for other alternatives for the location of the club. A letter was sent to ARDC regarding the \$19,000.00 grant for the generator. We are waiting for their reply, and hopefully they will let us use the grant in relation to the club having to potentially relocate.

Due to the above situation with the club lease, a motion was made, 2nd and approved to amend the Association Documents to reflect a permanent change in the election of new club officers. This amendment allows for new club officers to be elected in October instead of November. This will allow outgoing officers to work with incoming officers prior to the new year.

TREASURER'S REPORT

No meeting in July
June 16, 2026 balance \$11,672.08
June 24, 2026 Deposit \$19,000.00 ARDC Grant
June 26, 2026 ARRL \$135.00
June 30, 2026 Deposit \$285.00
July 31, 2026 Gas bill \$26.75
August 6, 2026 ARRL \$60.00
August 6, 2026 Balance \$30,755.33

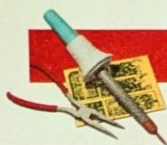
SECRETARY'S REPORT

Motion to accept June 2026 monthly meeting minutes 2nd and approved.
We have multiple new members from VE test sessions and 2 new members from the August monthly meeting.
Motion to Adjourn at 8:15 pm
VE Testing:

Our next test session will be September 12, 2026, at 9:00 AM, 230 Depot Street, Little Mt.

Club Clean-up

There will be a club clean-up day, Saturday, September 12, 2026, immediately following VE Testing. We need strong backs and willing hands.



By H. Ward Silver, N9AX

Test Your Knowledge!

A little mathematics knuckle-cracking to fight off formulaic frustration, cram for constant conversions, and prepare for postulate prognostication!

1. What is the reactance of a $0.01\mu\text{F}$ capacitor at 60 Hz? 1 kHz? 1.82 MHz?
2. The free-space wavelength of a 146.34 MHz signal is how many meters? Feet? Inches? Cm?
3. In order to keep your self-supporting tower upright at the maximum expected wind-load, you need a base that weighs 15000 lb. If concrete weighs 150 lb/ft³, how many cubic yards are required? Cubic meters?
4. Using a velocity factor of 66%, what is the length of the following transmission lines in feet?
 - a. $\frac{1}{4}$ -wavelength at 3.550 MHz
 - b. $\frac{1}{2}$ -wavelength at 443.5 MHz
 - c. 1-wavelength at 14.350 MHz
5. A counterweight for the new Zepp antenna needs to be at least 30 pounds to keep the wire taut. All you have is a pile of 2-kg weights. How many are required?
6. The weekend project is to put up a $\frac{1}{4}$ -wavelength sloper for the state emergency net on 3975 kHz. How long is the antenna in feet? If it's attached to your tower at a height of 55 feet and the lower end must be at least 8 feet above the ground, how far from the tower base will the end be?
7. Calculate the VSWR for the following combinations of forward and reflected power:
 - a. $P_f = 95\text{ W}$, $P_r = 5\text{ W}$
 - b. $P_f = 1400\text{ W}$, $P_r = 65\text{ W}$
 - c. $P_f = 10\text{ W}$, $P_r = 0.15\text{ W}$
 - d. $P_f = 800\text{ W}$, $P_r = 22\text{ W}$
8. The finest common subdivision of the Maidenhead Grid Square system are the $5' \times 2.5'$ subsquares. Assuming 60 nautical miles per degree, how big are subsquares in kilometers?
9. Willy's new rotor is rated to operate properly to -40°C . Billy just bought one rated to -40°F . Whose will operate at the colder temperature?
10. A tuned circuit must resonate at 10.105 MHz. Choose the proper value of inductance or capacitance that completes the circuit:
 - a. 680 pF
 - b. 4.7 μH
 - c. 220 pF
 - d. 1.5 μH
11. The wattmeter shows 1200 W going into the dummy load. What is the peak voltage appearing across the load?
12. A power tube requires 25 cubic feet per minute of cooling air, but you only have a squirrel-cage blower rated to deliver 1 cubic meter per minute. Will it suffice?
13. What is the length in both feet and meters of half-wave wire dipoles at the following frequencies?
 - a. 1.850 MHz
 - b. 7040 kHz
 - c. 24.900 MHz
 - d. 50.120 MHz
14. Convert the following between linear ratios and dB:
 - a. A loss of 1 dB equals a loss of how many percent?
 - b. A power gain of 8 is a gain in how many dB?
 - c. What is the voltage ratio corresponding to 6 dB?
15. A full-wave loop antenna for 3.6 MHz is 278 feet in circumference. If the loop is to be formed into a flat-top, isosceles triangle with a 120-foot horizontal section 75 feet above the ground, by how much will the apex clear the ground?

Bonus: What is the speed of light in furlongs per fortnight?

Count one point for each correct answer.

- | | |
|-------|---|
| 20-32 | You hardly broke a sweat! |
| 10-19 | Your brain is popping its circuit breakers. |
| 1-9 | Does not compute . . . does not compute . . . |

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- Answers**
1. 265 k Ω , 15.9 k Ω and 8.75 Ω
 2. 2.05 meters, 6.73 feet, 80.7 inches, and 205 cm—wavelength in meters = $300/f$ (MHz)
 3. 3.7 cubic yards or 2.83 cubic meters— $15000/150 = 100$ ft³ with 27 ft³/yd³
 4. 45.7 ft, 0.73 ft, 45.3 ft
 5. 6.8 exactly, so use 7 weights at 2.2 lb/kg
 6. 36.4 ft. The antenna is 58.9-feet long with a vertical drop of 47 feet, so the horizontal run is $\sqrt{(58.9^2 - 47^2)}$
 7. 1.6:1, 1.55:1, 1.28:1, and 1.4:1—use the formulas in section 19 of the *2000 ARRL Handbook*
 8. The subsquares are 5.75×2.88 miles or 9.26×4.63 km. Trick question—both rotors are rated exactly the same.
 9. -40°C and -40°F are equal temperatures.
10. 0.37 μH , 53 pF, 1.13 μH , 165 pF
11. 346V—1200W into a 50 Ω load generates 245 V_{rms}. To convert V_{rms} to V_{pk}, multiply by 1.414.
12. Yes. Divide m³ by 0.028316 to get ft³. The fan can deliver 35.3 cfm.
13. 253 ft or 77.1 m, 66.5 ft or 20.3 m, 18.8 ft or 5.73 m, 9.34 ft or 2.85 m—length in ft = $468/f$ (MHz)
14. 20.6%, 9.03 dB, and 2
15. The 120-foot flat top leaves 79 feet on a side. Each half of the loop becomes a right triangle with a hypotenuse of 79 feet and one side of 60 feet, leaving $\sqrt{(79^2 - 60^2)} = 51.4$ feet of vertical drop so that the ground clearance is $75 - 51.4 = 23.6$ feet.
- Bonus: 1.8×10^{12} furlongs/fortnight. A furlong is 40 rods, a rod is 16.5 feet, and a fortnight is 14 days.

Vertical line segment